

CLAIMS:

1. (currently amended) A remotely operated manhole cover for a tanker, the tanker having a shell defining a chamber which receives transportable materials; the manhole cover comprising:

a hollow neck having a side wall defining an opening and at least one locking member operatively mounted to said side wall to be movable between a locking position and an unlocked position;

a cover pivotable about an axis of rotation between a closed position in which said cover closes said hollow neck and an opened position in which said cover is substantially clear of said neck opening; said cover including at least one radially extending locking flange positioned on said cover to be aligned with said neck locking member when said cover is in its closed position;

a cover actuator operatively connected to said cover to move said cover between its opened and closed positions;

a lock actuator operatively connected to said at least one locking member to move said locking member between its locked position in which said locking member engages said cover locking flange and its unlocked position in which said locking member is clear of said cover locking flange;

a cover activator which, when energized, causes said cover actuator to move said cover between its fully opened and closed positions;

a lock activator which, when energized, causes said lock actuator to move said at least one locking member between its locked and unlocked positions;
and,

a controller in communication with said cover activator and said lock activator; said controller energizing said cover activator and lock activator in sequence to move said cover between its opened and closed positions and to move said locking member between its locked and unlocked positions.

2. (original) The remotely operated manhole cover of claim 1 wherein said controller includes a manually operable switch assembly in communication with said cover activator and said lock activator; said switch selectively movable between a cover open position in which said switch assembly energizes said cover activator and said lock activator to unlock and open said cover and a cover closed position in which said switch assembly energizes said cover activator and said lock activator to close and lock said cover.

3. (original) The remotely operated manhole cover of claim 2 wherein said switch assembly comprises a single switch.

4. (original) The remotely operated manhole cover of claim 1 includes a hollow, generally tubular seal in an underside of said lid; said seal engaging an upper surface of said neck when said cover is in its closed position to form a fluid tight seal between said cover and said neck.

5. (currently amended) The remotely operated manhole cover of claim 4 wherein said seal includes is an inflatable/deflatable seal; said manhole cover including an air supply line which is operably connectable to a source of air and is in communication with said inflatable seal; said seal being movable in response to signals from said controller between an inflated state and a deflated state.

6. (original) The remotely operated manhole cover of claim 5 wherein said controller is operable to deflate said seal to unlock and open said manhole cover and is operable to inflate said seal to lock said manhole cover.

7. (currently amended) A remotely operated manhole cover for a storage tank, the tank having a shell defining a chamber which receives flowable materials and an opening in said shell which is closed by said manhole cover; the manhole cover comprising:

a cover pivotable about an axis of rotation between a closed position in which said cover closes said tank opening and an open position in which said cover is substantially clear of said tank opening;

a locking assembly having a first portion radially mounted to said cover and a second portion radially mounted to said tank shell; said locking assembly being movable between a locked position in which said first and second portions are engaged to hold said cover in its closed position and an unlocked position in which said first and second portions are disengaged to allow said cover to be moved to its opened position;

a cover actuator operatively connected to said cover to move said cover between its opened and closed positions;

a lock actuator operatively connected to said locking assembly to move said locking assembly between its locked and unlocked positions; and,

a controller in communication with said cover actuator and said lock actuator; said controller activating ~~said~~ a cover activator and a lock activator in sequence to unlock and open said cover and to close and lock said cover.

8. (original) The remotely operated manhole cover of claim 7 including a hollow, generally tubular seal in an underside of said cover; said seal forming a fluid tight seal between said cover and said tank opening.

9. (currently amended) The remotely operated manhole cover of claim 8 wherein said seal is an inflatable/deflatable seal; said manhole cover including an air supply line which is operably connectable to a source of air and is in communication with said inflatable seal; said seal being movable in response to signals from said controller between an inflated state and a deflated state.

10. (original) - The remotely operated manhole cover of claim 9 wherein said controller is operable to deflate said seal to unlock and open said manhole cover and is operable to inflate said seal to lock said manhole cover.

11. (original) The remotely operated manhole cover of claim 7 wherein said controller includes a switch located remotely from said cover; said switch being movable between a first position to close and lock said cover and a second position to unlock and open said cover.

12. (new) A remotely operated manhole cover for a tanker, the tanker having a shell defining a chamber which receives transportable materials, comprising:

- a hollow neck having a side wall defining an opening and at least two locking members symmetrically disposed and operatively mounted to said side wall to be movable between a locking position and an unlocked position;

- a cover pivotable about an axis of rotation between a closed position closing said hollow neck and an opened position clearing said neck opening; said cover including at least two radially extending locking flanges positioned on said cover to be aligned with said neck locking members when said cover is in its closed position, wherein said locking members and said locking flanges in cooperation with said cover secure said cover at at least three points;

- a cover actuator operatively connected to said cover to move said cover between its opened and closed positions;

- a lock actuator operatively connected to said at least two locking members to move said locking member between its locking position in which said locking member engages said cover locking flange and its unlocked position in which said locking member is clear of said cover locking flange;

- a cover activator which, when energized, causes said cover actuator to move said cover between its opened and closed positions;

- a lock activator which, when energized, causes said lock actuator to move said locking member between its locked and unlocked positions; and,

- a controller in communication with said cover activator and said lock activator; said controller energizing said cover activator and lock activator in

sequence to move said cover between its opened and closed positions and to move said locking member between its locked and unlocked positions.

13. (new) The remotely operated manhole cover of claim 12 wherein said locking members and said locking flanges are mutually and symmetrically disposed on both sides of the longitudinal axis of said cover; said longitudinal axis extending perpendicular to the axis of rotation of said cover and through the center of said cover.

14. (new) The remotely operated manhole cover of claim 13 wherein said locking members and said locking flanges are approximately forty five degrees in rotation away from said longitudinal axis.

15. (new) The remotely operated manhole cover of claim 13 further comprising:

a pair of arms symmetrically joined to said shell and then to a mounting flange, said mounting flange joined to and coplanar with said cover coaxial with the axis of rotation;

whereby, each of said locking members and said locking flanges are located adjacent to an axis extending from each of said arms.